observed any immediate effect of a marked nature that could be attributed solely to their influence. With opium, on the other hand, the effect is so striking, that there can be no question of its reality. In my communication to the Clinical Society, besides the case above alluded to, two others were mentioned, in both of which the sugar was removed—in the one instance by opium, and in the other by morphia. In these cases, there was no other agent administered. They were cases of the disease in middle-aged subjects. The sugar was reduced as far as it could be by a restricted diet; and then, under the influence of the morphia and opium, it was entirely removed. * * *

"Of what service as a curative agent, opium, in larger doses than it has been customarily given, may prove in cases in general, I do not at present pretend to say. Much more extended observation is required before this point can be determined. Whatever may happen to be disclosed by subsequent experience, it cannot be denied, I think, that we have before us an important therapeutic fact. The woman whose case formed the basis of my communication to the Clinical Society has been seen by me from time to time up to as recently as a fortnight back. She has taken no opium or other kind of medicine since October last; has been living (as she did when under treatment) upon an ordinary mixed diet; and has been passing urine devoid of sugar. Her case, in fact, up to the present time, forms an example of a direct and perfect cure."

30. *Arsenic in Treatment of Diabetes.*—Dr. Leube gives an elaborate report of two cases of diabetes in which he made the most careful daily observations of the quantity of water, of sugar, etc. He arrives at the following therapeutic conclusions: Pure meat diet (with only *almond*, bread) was the most powerful means of reducing the sugar excretion. Of drugs which were tried, *arsenic* had by far the most remarkable effect in reducing the sugar. Saikowsky discovered, some three years ago, that the continuous administration of arsenic for several days to animals entirely removed all glycogen from the liver; and that then neither puncture of the fourth ventricle nor curara poisoning would produce diabetes at all. Leube made the therapeutical application of the drug which these experiments suggest. He administered Fowler's solution in doses equivalent to about one-third grain of arsenic daily. The effects were most striking during the period when the patients were taking a *mixed* diet. With mixed diet, and without arsenic, the daily average of sugar was 570 grammes in one case: arsenic reduced it to 352 grammes, on the average of 79 day and night observations; and substantially the same result was obtained in the other case. The use of this drug would appear to promise results of real importance. —*The Practitioner*, May, 1869, from *Deutsches Archiv f. klin. Med.* V. 3 and 4.

31. *The Hypodermic Injection of Morphia in Mental Disease.*—Dr. C. Lockhart Robertson gives (*The Practitioner*, May, 1869) a brief outline of three successful cases illustrating the treatment by the hypodermic injection of morphia in recent mania, chronic mania, and melancholia respectively. Dr. R. uses a solution of six grains of the acetate of morphia to the drachm, and always commences ♏ v of the solution (gr. ss) and in only one case out of many hundred hypodermic injections of morphia has any injurious effects followed the remedy thus used. In the three cases related by Dr. R. the beneficial effects of the remedy were marked.

SURGICAL PATHOLOGY AND THERAPEUTICS, AND OPERATIVE SURGERY.

32. *Traumatic Fracture of the Larynx.*—Mr. Wm. Stokes, Jr., relates (*Dublin Quarterly Journ. of Med. Sc.*, May, 1869) an interesting case of comminuted fracture of the cricoid cartilage which presented features which render it, Mr. S. thinks, almost unique in the history of these injuries.

The subject of the case was a female who had received a kick in the throat from her husband. Soon afterwards dyspnœa came on which rapidly increased in intensity, and she was immediately brought to the Richmond Hospital. On her admission she was almost inarticulate; there was a cold sweat on her forehead; her pulse slow and weak; her face much flushed, and her lips livid. Her respiration was laboured and difficult, but not so much as to make those about her think that the case was about to terminate so suddenly as it did.

Mr. S. was immediately sent for, but just before his arrival the patient had expired. Mr. S. found considerable flattening, and abnormal breadth of the throat. There was no apparent ecchymosis, but much effusion and infiltration among the soft structures were distinctly felt. From these appearances, as well as from the abnormal mobility of her laryngeal cartilages, and also an obscure crepitation, the diagnosis of fracture, with displacement of one or more of the cartilages, of the larynx, was made—a diagnosis which the *post-mortem* examination verified. All the soft tissues about the larynx were found profusely infiltrated with blood, although no laceration of a large vessel could be determined; it was more copious and extended further back on the right side than on the left. On taking out the larynx there was found a double fracture of the cricoid cartilage. These two fractures were symmetrical, each being situated at about half a quarter of an inch from the middle line. There was displacement backwards and slightly inwards of the left fragment, separation of its articulation with the inferior cornu of the thyroid, and considerable laceration of the crico-thyroid muscle on that side. The displacement of the fractured portion of the cricoid was not observed on the right side. Here, posterior and external to the thyroid and cricoid cartilages, and by the side of the epiglottis, there was a considerable effusion of blood, of itself contributing in no small degree, by its pressure from without, to the closure of the larnyx. The obstruction, however, was chiefly caused by the effusion of blood beneath the mucous membrane of the larynx, especially under the aryteno-epiglottidean folds, and in the ventricles of the larynx, which produced almost complete occlusion of the glottis, and consequent apnœa. There was no laceration of the mucous membrane, and consequently no emphysema.

The occlusion, therefore, was caused, says Mr. S., by the existence of the four following conditions:—

"1. Effusion of blood external to the larynx.
2. Effusion under the lining membrane causing closure of the glottis.
3. Displacement inwards of left fragment of cricoid.
4. Displacement of arytenoid on right side.

In this case, therefore, we had an injury of the larynx, which, as far as I can determine, is unique in its character, viz., a multiple or comminuted fracture of the cricoid, and also a double displacement, one of a fragment of the cricoid, and the other of the right arytenoid."

Mr. S. quotes from the memoir of M. Cavasse (Paris, 1860), on laryngeal fractures, the functional and physical signs of these injuries and gives brief details of the following case which came under M. Maisonneuve's care in la Pitié, May 10, 1857. A man, aet. 24, was thrown down by a cart, one of the wheels of which crushed the larynx in passing over the anterior portion of the neck. On his admission he was in a state of semi-apnœa, with all the other usual signs and symptoms of an impeded respiration. Apnœa was warded off by a venesection, but its good effects did not last; a second was performed, and a third the day after. On the fifth day the dyspnœa became so urgent that tracheotomy was performed. The operation, owing to the crushed and flattened condition of the larynx, and the neighbouring soft parts being swollen and contused, was accomplished with extreme difficulty. The case did very well; but the patient, owing to the contraction of the larynx, which became permanent, was obliged ever afterwards to wear a tracheotomy tube.

In the number of this Journal, for April, 1866, pp. 378, Dr. WM. HUNT recorded a highly interesting case of fracture of the larynx and rupture of the trachea, and presented a table of sixty-nine cases, which he had collected from various sources. A case related by M. FREDET, will also be found in the No. of this Journal for April last, p. 548.

33. *Impacted Fracture of the Neck of the Thigh-bone.*—Mr. Thomas Bryant has published (*Med. Times and Gaz.*, April 17 and May 1) fourteen cases of impacted fracture of the neck of the thigh-bone, with a table illustrating the clinical symptoms of that accident. From an analysis of the latter Mr. B. draws the following conclusions:—

"1. That in all the cases the injury to the hip-joint was communicated through the great trochanter.

"2. That, as a result of the injury, there was more or less loss of power in the limb; in some of the cases it was complete; in as many the patient could rotate the limb slightly on the couch; and in two cases partial flexion of the thigh could be performed.

"3. That in all the cases immediate shortening of the injured limb was the direct result of the accident; and that this shortening was about one inch or less, and was irremediable by extension.

"4. That the foot of the injured extremity was either straight or slightly everted, although in several cases this eversion was less marked on the injured than on the sound side.

"5. That the great trochanter was placed nearer the median line of the body. and also nearer the anterior superior spinous process of the crest of the ilium, than on the sound side.

"6. That the head of the femur could be made to rotate smoothly in the acetabulum, and that the great trochanter moved with it.

"7. That crepitus was either absent or indistinct in all the cases.

"8. That all the cases, with one exception, occurred in patients past middle age.

"Now these symptoms, taken as a whole, without the slightest doubt indicate an impacted fracture; for, although there are other injuries to the hip-joint which may give rise separately to many of the symptoms just detailed, there are none in which all or most are found combined. There is no injury to the hip-joint in which the head of the femur rests, and can be made to rotate. in its acetabulum, in which immediate shortening is ever found, with the exception of a fracture; and there is no form of fracture that occurs under like circumstances, with the exception of the impacted, that is not accompanied by a crepitus which can be readily detected, complete eversion of the foot, and loss of power over the limb. In fact, the symptoms of an impacted fracture are most marked when taken together, and cannot well be misinterpreted. They are as marked as those of ordinary dislocation of the head of the femur, or of an ordinary non-impacted fracture of the neck of the bone.

"As a conclusion, I would therefore again repeat that I believe it would be a far safer clinical rule of practice to suspect all cases of severe injury to the hip-joint received through the great trochanter to be examples of impacted fracture of the neck of the thigh-bone. and to conclude that such is not the case when the symptoms clearly prove a different condition, than to leave the suspicion of such an injury out of consideration altogether, or only to entertain the idea of its presence when the symptoms which the case presents are clearly inconsistent with the existence of any other form of recognized injury. By the strict observance of this rule I feel convinced that mistakes in practice would not be so frequent or so serious, for errors in diagnosis would be more rarely made."

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34. *Compound Fracture of the Lower Third of the Leg with possible Penetration into the Joint.*—At the last meeting of the Paris Surgical Society, a discussion took place on the appreciation of the amount of danger attendant upon compound fracture of the lower third of the leg, with possible penetration into the joint, and how far amputation or an attempt to save the limb should be the rule of practice in such cases. M. Le Fort distinguished these three circumstances: 1. When the fracture is complicated by a wound of slight extent, unaccompanied by much shattering or considerable splinters of bone, an attempt should be made to preserve the limb by converting the compound into a simple fracture by the aid of occlusion effected by the application of goldbeaters' skin and collodion, thus substituting a kind of artificial skin for

the lost external integument. In this way a considerable number of such fractures may be successfully treated. 2. When the injury is more considerable, and there exists splinters, but there is reason to believe that the joint has not been penetrated, conservation of the limb may still be attempted. The splinters are to be removed, and the end of the bone which projects is either to be reduced or excised, treating the subsequent inflammation by appropriate means, *e.g.*, by continuous irrigation. 3. When there is good reason to believe that the joint is penetrated, which is almost always the case when the perforation of the skin has been made from within outwards by the issue of the bone, then the best chance of saving the patient's life is by immediate amputation. It is especially in the case of fracture termed spiroid and V-shaped that M. Le Fort, in common with M. Bérenger-Ferand, is a partisan of immediate amputation. M. Panas has tried in three cases to preserve the limb in compound fracture situated at two or three fingers' breadth above the joint. Two terminated fatally, the fracture being found communicating with the joint, and the other recovered, there being reason to believe that in this the communication did not exist. In two other cases M. Panas practised immediate amputation, both patients dying, and in both communication with the joint existing. In two of his cases alcoholism and the hygienic conditions under which the patients were treated may have contributed to the fatal termination. Seeing the frequency with which these fractures do communicate with the joint, he is of opinion that when they are situated near it and are complicated with wounds, immediate amputation constitutes the best practice. M. Demarquay believed that no positive indications for the surgical treatment of these cases can be laid down, for there exists no sign enabling us to ascertain with certainty whether the fracture has penetrated the joint or not. Nothing can be more simple and expeditious than the precept always to amputate, but experience has shown that some of these patients can be completely cured without amputation. Still, M. Demarquay is not disposed to overlook the gravity of comminuted fractures of the lower end of the tibia; but except in cases of extreme urgency, wherein the amount of the injury decides practice, he sees nothing but doubt and uncertainty in all that concerns the indications and contraindications of immediate amputation, and in a case of doubt he inclines to the side of conservative surgery. M. Trélat observed that the anatomical diagnosis of comminuted fractures of the lower end of the leg by no means necessarily carried with it the prognosis; and, in the present state of science, it is impossible to determine in advance the issue of a given complication. Thus, it cannot be foretold whether a fracture with penetration of the joint will be followed by a cure or not; for cases are met with in which formidable accidents arise, while in others recovery takes place without any grave complication occurring. It is a question of prognosis rather than of anatomical diagnosis. M. Trélat has had occasion to treat five individuals in full vigour of age and constitution who were subjects of fractures of the lower third of the leg, the fractures being comminuted, with fragments projecting, of the spiroid variety, regarded as dangerous beyond all others, and in all probability communicating with the joint. These were all cured without amputation, through the aid of various means, employed separately or combined, as occlusion with Goldbeater's skin and collodion, special adjusting apparatus, large incisions laying open the centre of the fracture, reduction, excision, drainage, ablution, detersive and disinfecting injections, etc. Thus, in these young and robust persons conservative surgery completely triumphed, notwithstanding the severest complications; and it is indeed impossible to lay down any certain indications as to the performance of immediate amputation in such cases, because it is impossible to foresee the issue of the lesions which accompany this description of fracture, even the severest of which may be followed by recovery when the patients are placed in favourable general and individual conditions. M. Marjolin added that account must also be taken as to whether the fractures have been produced by direct or indirect causes. He agreed with other speakers that it is impossible to say at first whether or not the fracture will or not allow of preservation of the limb.—*Med. Times and Gaz.* May 22, 1869.

35. *Severe Rupture of the Kidney; Recovery.*—Mr. T. B. Curling relates (*Brit. Med. Journal*, May 15, 1869) the following case: A. R., a healthy man, aged 32, an engineer, fell from a height of about four feet on the round top of an iron worm, striking the left side of his abdomen between the ribs and crest of the ileum. Shortly after the accident he vomited, and he was then carried to the London Hospital suffering from pain at the seat of injury, and in a state of partial collapse. The house-surgeon (Mr. Sheffield) on examining the surface of the body could detect no marks of injury. The patient refused to remain in the hospital, and returned home. In a few hours he vomited a small quantity of blood, and passed some urine darkly tinged with blood. The next day (November 5th, 1868) he returned to the hospital, suffering great pain in the loin, and he was then admitted. He was ordered to bed, a dose of laudanum was given him, and he was put on a diet of milk and beef-tea. The pain continued, and he passed thick dusky-looking urine. On the 8th, the pain became more severe, and his urine became bloody, so much so that in the evening he passed by the urethra almost pure blood. He was ordered a grain of opium every four hours. I saw him for the first time on the 10th. His pains were relieved by the opium, but he was voiding blood very freely, and he continued to do so for several days, until he became quite anæmic and faint. Mustard plasters were applied to the left loin. On the 12th, he was seized with severe and continuous pain in the left loin. He had a haggard expression, and his lips were nearly colourless. He was restless and unable to sleep. Pulse 130; temperature 101.2; respirations 34 per minute. He afterwards suffered severely from vomiting. Blood still flowed with his urine. The pain in the loin was relieved by cupping, dry and wet, only a few ounces of blood being removed. Vomiting was allayed by sucking ice and taking brandy and soda water. In a few days the pain subsided, and he was able to take light nourishment. The muriated tincture of iron was ordered for him. The urine still contained a good deal of blood, and was alkaline, depositing a large quantity of the triple phosphates with a few oxalates of lime. Counter-irritation by dry cupping was repeated, and gallic acid was substituted for the steel medicine. From this time the quantity of blood in the urine gradually diminished, and pus made its appearance and soon became abundant. He regained appetite and strength. By December 7th, he was able to leave his bed and move about the ward. All appearance of blood had ceased, but the urine contained pus and phosphates till the 11th, when it was free from deposit, and presented its normal colour. Specific gravity 1020. From this date he continued to improve in health and strength, and was discharged on the 15th. He was still weak and pallid and was cautioned to do no work, and to attend carefully to his health. He made his appearance at the hospital on the 29th, looking much better, and feeling stronger. He was free from all uneasiness, and his urine was quite clear.

The above is an abstract of the notes of the case, carefully taken by the dresser, Mr. Oswald Baker. The history of the injury and symptoms leaves no doubt that the man had sustained a severe rupture of his left kidney. The contusion in the loin, immediately followed by collapse and sickness, and soon afterwards by the passage of blood from the bladder, the continued hæmaturia accompanied with pain in the region of the kidney, and as the bleeding disappeared, the flow of pus with the urine, are all symptoms indicating that such was the nature of the lesion. The losses of blood were so large, and continued so many days, as to enfeeble the patient in an alarming degree. The tincture of perchloride of iron did not appear to check them, but they soon subsided after the patient had taken a few doses of tannic acid, but whether the cessation of the bleeding was owing to the influence of the remedy or to natural causes may be doubtful. The lesson to be learnt from this and similar cases of recovery after serious internal injury, is the reliance to be placed on nature's powers of repair, if not marred by unnecessary treatment. The kidney is one of the best protected organs in the body; and in the London Hospital, where so many accidents are admitted, a rupture of this organ is comparatively a rare injury, except in those crushing accidents or "buffer" injuries in which no organ or part is exempt from violence. Slight hæmaturia after a contusion in the loins occurs sometimes, the symptoms of injury being mild, and recovery speedy.

But an extensive lesion, such as must have existed in the case I have related, is not common, and must be always dangerous, though not immediately so. Many years ago, a labourer, aged 30, was admitted into the London Hospital, having been injured by part of a brick wall falling upon him. His loins were contused, but there was no suspicion of any serious internal injury. Ten days after the accident, he suddenly complained of severe pain in the lower part of the back; his abdomen became distended, and he sank rapidly, and died in a few hours. On examination of the body, I found the right kidney in the centre of an enormous mass of coagulated blood, ruptured transversely in two. Mr. Cock has related, in the first volume of the *Pathological Transactions*, a remarkable case of a complete transverse rupture of a large left kidney from a fall, in a lad, aged 18, whose right kidney was congenitally deficient. The lad lived, however, eleven days, became comatose, and died of urea-poisoning. Recovery after a laceration of the kidney must depend very much on the extent of the rupture and of the injury to the bloodvessels, as well as on the health and age of the patient. We have very rarely an opportunity of ascertaining the extent of renal injury which may be borne without giving rise, sooner or later, to fatal consequences. Indeed, I know of no pathological investigations bearing on this point, with the exception of an observation contributed by Mr. Holmes to the eleventh volume of the *Pathological Transactions*. A kidney was removed from a man, aged 34, who died with dropsy after rupture of the kidney by the kick of a horse eighteen months previously. The line of rupture could be faintly traced through the substance of the gland. The ureter, which had been divided, was completely impervious. As the blood which flows after a severe laceration of the kidney finds a means of escape by the ureter, or becomes extravasated in the surrounding areolar tissue, the injury to this organ is not so dangerous as a laceration of the liver or spleen, in which the blood escapes into the peritoneal cavity without restraint, causing inflammation of the serous membrane.

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36. *Curare in Trismus and Tetanus.*—Prof. BUSCH, of Bonn, gives us a record of his experience in the history and treatment of traumatic trismus and tetanus during the Bohemian war of 1866.[1]

The fights in Paris in 1848 brought one thousand wounded to the hospital, but none were attacked by tetanus. During the Schleswig-Holstein war, 1849, a single case came under the notice of Stromeyer. On the other hand, there were 86 cases during the Italian war of 1859, on the Austrian side, as Demme informs us, and even more—namely, 140—on the Italian side. The expedition to the Crimea occasioned the admission to and treatment of 12,094 wounded in the English hospitals, 19 of whom only suffered from subsequent attacks of tetanus. 363 such cases occurred during the great American war. The percentage of occurrence is largest in hot climates; for instance, Gilbert Blanc states that 30 cases of traumatic trismus and tetanus happened during the West Indian war, when the number of wounded, was 810.

Dr. Busch had 21 cases under his observation in his field hospitals. Twelve of them were in the castle of Hradek, where 500 patients were accommodated 5 in the Lazaretto of Nechanic, where 600 were confined, 2 in Castle Prim, and 2 in Castle Stracow. Dr. Busch believes that special localities and over-crowding favoured the attacks. Almost all the cases were gunshot wounds of the lower extremities; this is partly explained by the timely removal to more distant hospitals of those who had wounds of the upper limbs.

The percentage of recovery is larger in tropical climates—at least Blanc saved 43 per cent.; of Demme's cases 7 per cent. recovered; 7.4 was the percentage in the American war; of Busch's 21 cases 7 were saved—*i.e.*, 33⅓ per cent. The proportion is the more favourable the less acute the cases are. Where the symptoms become alarming on the first or second day of the attack, where the pulse rises to 90, to 120 beats, and the temperature exceeds 40° C., no hope is left. The intensity of the single attacks, the rapidity with which the convulsions spread from one group of muscles to the other, are of bad augury. When, shortly after the first warnings, the neck gets stiff, the teeth cannot be separated, when soon after the convulsions reach the trunk and extremities, and the tonic spasms change into clonic, the patients usually die. On the contrary, there is more chance of recovery when the mobility of the neck is only slightly interfered with, when the difficulty of opening the mouth increases slowly, when to the affections of the muscles of deglutition and mastication either no general convulsions supervene, or the muscles of the trunk and extremities suffer only at a late period and moderately. The time the disease lasted varied in Busch's cases from twelve days to a month.

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[1] Dr. Busch "On Trismus and Tetanus," reprinted from the *Transactions* of the Rheno-Westphalian Association for Natural History and Science, 1867. Verhandl. des Naturh. Vereins für Rheinland und Westphalen. pp. 15.

Demme treated 22 cases with curare, 8 of which recovered, Busch 11 cases, 5 of which ended fatally. Of the 6 who recovered, one owed his health more to morphia given subsequently to the curare than to the latter. In very acute attacks Busch thinks it of no use to try curare; he treated his first 9 cases with morphia and inhalations of chloroform. He had one remarkably bad case where a quarter of a grain of morphia was injected every two hours, and the patient recovered, contrary to all expectation. The mode of exhibiting the curare was by subcutaneous injection; $\frac{1}{50}$ to $\frac{1}{30}$ grain of the pure article will suffice, injected every two hours. The 11 cases are related in which this was done, and the post-mortem appearances given in some. The author refers to the experiments of Humboldt, Brodie, and Voisin, made on animals, to the treatment of tetanus in horses with curare by Lavell (1810–12), and its first use in men by Vella (1859). The physiological effect of curare is paralysis of the ends of the nerves in the muscles; by this the electric currents are impeded from reaching these muscles. It seems that the peripheric ends of these nerves get earlier paralyzed in those muscles affected with electric tension than in those not affected with tetanus.

The improvement of the patients is attested by the decreasing intensity of the convulsions. The patients themselves urgently requested the exhibition of the remedy as soon as they became aware of an imminent spasm by the increased rigidity of the muscles.

The author considers it desirable to employ in future the efficient component part of the remedy—the *curarine.* Sulphate of curarin was exhibited at a subsequent meeting by Dr. Preyer.—*Med. Times and Gaz.*, May 1, 1869.

37. *Traumatic Tetanus Treated by Nicotine.*—Mr. Morgan communicated to the Surgical Society of Ireland (April 20th, 1869) a case of traumatic tetanus in a boy æt. 15, admitted into Mercer's Hospital under his care, March 4th, with a compound comminuted fracture of the great toe. On the 5th day, Mr. M. removed the toe, which had lost all vitality. For the seven succeeding days the patient went on well. On the 17th of March slight symptoms of tetanus manifested themselves, and four days after, March 21st, spasmodic fits appeared. "During sleep the tongue being protruded and snapped between the teeth; the muscles of the jaw becoming now so tense that a wedge of wood is introduced to keep the teeth apart. He complains of a severe dart occasionally, not from the xiphoid region, but from under the left axilla towards the spine, corresponding to the upper dorsal region; there is no tenderness on percussion. Opisthotonos is now so marked that the arm can be passed under the body without touching it, the general rigidity of the muscles is increased, and the spasms of the muscles of deglutition, when an attempt at swallowing is made, are severe. Having given the ice-bag full trial, and the symptoms were undoubtedly steadily increasing in intensity, I now determined on the careful use of nicotine. The pulse was 124; respiration as high as 28; muscular tension universal, and the spasms, especially of the larynx and throat, threatened a rapid death from suffocation, the sensation of choking was the chief one complained of by the boy. The bowels had been thoroughly cleared, the influence of mercury had been brought to bear, and anti-spasmodics in the shape of camphor and opium had been fairly tried. I commenced on the mid-day of the 21st, the use of the one-twenty-third of a drop of nicotine; five drops of liq. morph. every three hours, which was given in a little wine. The first two doses did not seem to have much influence, but at the third, in fifteen minutes after

the administration, he felt sickish, and got even paler than he had been; the pulse came down six beats, and the respiration four; the abdominal tension somewhat diminished. During the night he had three violent spasmodic attacks, and one during the day.

March 22d.—The muscles still rigid, though somewhat relaxed. It is remarkable that in about *fifteen minutes after each dose he falls asleep for about ten minutes, and the tension,* certainly decreases. The stomach is inclined to be sick directly afterwards. Pulse now 100; respiration 22.

23d.—As he has become now more tolerant of the medicine I increased it to one-eighteenth of a drop every four hours with good results, without causing sickness. The jaws remained rigid, the gag has still to be used, but he can remove it at times. Pulse now 96; respiration 20. He says he is now in less pain, and freer from the spasm of the throat muscles.

24th.—I now increased the dose to one-fifteenth of a drop every four hours, with five of liq. morph., the tension of the muscles now showed evident relaxation; he was able in the evening to draw up his legs, which gave him relief as the muscles were extremely sore, the muscles were relaxing, and he could swallow fluid in jerks by mouthfuls. The mouth can be opened about half way.

25th.—The symptoms are gradually yielding, the patient cannot dispense with the gag, but is able to turn on his side, and move the legs. The nicotine was continued.

26th.—From this date diminished the nicotine to every six hours, and from that time I considered him safe; being six days under the influence of nicotine. The boy was much reduced, the flesh, emaciation, and debility."

Mr. Babington of Londonderry gave nicotine in a case of traumatic tetanus, in the dose of one-third of a drop, but gave it up in consequence of the frightful depression induced.

Mr. TUFNELL said he had used nicotine in the treatment of tetanus on three occasions, twice successfully, once unsuccessfully. They were all cases of traumatic tetanus, and the doses he used were the drop doses recommended by Dr. Haughton. The great difficulty he experienced was in getting the patient to swallow the dose; the aversion of the patient to take it was intense, and it had almost to be forced into the mouth, and got down by trickling. He thought if the statistics were carefully taken of the recoveries by nicotine—he would not use the word cure—and by other means, it would be found that the nicotine had been the most successful.

Prof. WUNDERLICH reports two cases of traumatic tetanus which were not, however, of a violent character, which got well under the administration of tincture of aconite.—*Medical Press and Circular*, June 2, 1869.

Cases of traumatic tetanus occasionally recover under the use of a great variety of remedies, but much more frequently a fatal result follows the administration of the same articles. How far in the successful cases the recovery is due to any particular drug, or to other causes which are often overlooked, it is frequently difficult to determine; but he who expects success in the treatment of every case from any single known remedy is, we feel sure, doomed to disappointment.

38. *Essence of Turpentine in the Treatment of Wounds.*—It is stated in *Archiv. Med. Belges* that essence of turpentine has lately proved the only successful measure against the progress of hospital gangrene. All other substances were tried in vain. Thus the wounds being well washed, they were dressed with lint steeped in essence of turpentine, and they very rapidly became healthy and healed.—*Practitioner*, April, 1869.

39. *Hypodermic Injection of Ergotin in the Treatment of Aneurism.*—Prof. LANGENBECK writes an important paper on this subject. From the well-known influence of ergot in provoking contractions of the organic muscular fibres of the uterus, he was led to think that a similar stimulation might be produced by it, with beneficial effect, in the muscular coats of arteries in cases of aneurism. The first case in which he employed it was one of subclavian aneurism in a man aged 45. The tumor was treated in the first place on Jacobson's plan,

with the repeated application of moxas, and a great diminution of all the symptoms took place, and lasted for three years; but the pulsation continued. In consequence (as the patient thought) of an excessive summer heat, a relapse took place, the tumour enlarged greatly, and all the old symptoms returned. Three centigrammes of aqueous extract of secale were injected over the tumour, with great relief to the pain and consequent insomnia. Between January 6 and February 17 about 30 grains of ergotin were injected, with the effect of so greatly relieving the symptoms of pressure in veins, that the pain and paralysis of the arm and hand were diminished to a remarkable extent. The pulsations of the aneurism were also sensibly weakened, and the tumor somewhat shrunken. In a second case—one of aneurism of the radial, about an inch and a quarter above the wrist, and which had existed for many years—about one-fourth of a grain of aqueous extract of secale (dissolved in seven times its bulk of half and half glycerine and sp. rectif.) was injected into the skin above the tumour, and on the following day the tumour appeared to have vanished. The cure became apparent, and the only trouble was a local erythematous inflammation which lasted some days. Langenbeck discovers that it was natural that more powerful effects should be produced by the remedy in radial than in subclavian aneurism, since the radial artery is more copiously furnished with muscular fibres than the subclavian.—*The Practitioner*, May, 1869, from *Berlin Klin. Wöchensch.*

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40. *Method of Making the Interrupted Suture by Means of Fine Sewing Needles.*—Surgeon J. LAMPREY, 67th Reg., states (*Med. Press and Circular*, May 19, 1869) it struck him "that the ordinary suture needle, which is also required in using fine metallic wire, and a very formidable weapon in its way, capable of making a considerable wound and giving rise to severe pain, might be dispensed with by using the finest sewing needles, and making them serve the same purpose as the wire or thread, in the manner suggested by the twisted suture, but with this difference, that instead of inserting the needles at the distance of half an inch or so from the edges of the wound, if I inserted them quite close to the margin of the edge and pass them through the cutis alone, without touching the deeper tissues, I could keep the edges of the wound in close coaptation sufficiently long to allow of immediate union taking place.

"Accordingly, on the first occurrence of a case of incised wound, I inserted a fine needle, of the kind used in sewing cambric, through the margins of both edges of the wound, and bringing them together, I secured them in that position by passing a single noose of ligature silk from one extremity of the needle to the other, and taking care to avoid unnecessary pressure or constriction. At a distance of about three-eighths of an inch I inserted a second needle in a similar manner, and noosed it also, and again a third needle, and so on throughout the whole extent of the wound. I then removed by means of the cutting pliers both ends of the needles, merely allowing an eighth of an inch of the needle to project above and below the wound.

"Before inserting the needles, I applied a solution of carbolic acid diluted to $\frac{1}{40}$ to the open wound, and when they were inserted I applied lint wet in the same solution, and covered all with a piece of gutta-percha tissue. On the following day I removed the external dressing and withdrew the needles carefully, so as not to disturb the noose of silk thread which acted as a support to the recent agglutinating lymph holding the edge of the wound together. I allowed all to be exposed to the air by applying no further dressing, and in a few days, the nooses of silk thread being quite superficial fell off, leaving the smallest trace of a cicatrix behind. No discharge of pus or ulceration followed this proceeding. I have recently had some extensive cutaneous wounds, one of them a large scalp wound treated in this way, and the results were so satisfactory, that I have no hesitation in treating all similar wounds in the same manner.

"The advantages of this mode of treatment appear to be as follows:—

"1. The fine needles make the smallest possible wound.

"2. They are inserted and remain so, thus causing a minimum of pain.

"3. Their presence causes no irritation, consequently there is no secretion of pus or ulceration.

"4. They are much more easily and expeditiously applied than other modes of making suture.

I prefer removing the needles on the following day, though if necessary they could be retained longer, but once immediate union is established they are no longer required, and should be removed at once. This removal is much facilitated by using only the pointed extremities of the needles, owing to their taper form, and with this view, I now only allow so much of the needle to project on the opposite side of the wound as will permit of the easy application of the noosing thread. I have also observed, that the longer the needle remains in the wound the facility of removing it becomes less, as the oxidization of the needle increases its size, and roughens it. Still a little rotatory movement will enable it to be extracted by the forceps quite easily.

"Having seen so much benefit derived from the use of carbolic acid, I apply it in all cases to such wounds in the manner stated, as I consider it not only has valuable antiseptic properties but also prevents the formation of pus, and as it could not be applied to wounds kept together by adhesive plaster, these sutures are necessary.

"From what I have observed in this mode of applying sutures to wounds of a superficial character, I should have no hesitation in adopting the same method for bringing together the flaps in cases of amputation, using, if necessary, a stronger needle, and inserting it a little further from the margin, and using fine iron wire in lieu of ligature silk."

41. *Ovariotomy.*—Mr. T. SPENCER WELLS reported to the Royal Med. and Chirurg. Sociey, a third series of 100 cases of ovariotomy, with remarks on tapping ovarian cysts. The author has arranged in all the cases in which he has completed the operation of ovariotomy, from the 200th case included in previous papers to the 300th. In other tables he gives particulars of all his incomplete and exploratory operations. He finds that the mortality lessens as experience increases. Of the first 100 cases, 34 died, and 66 recovered. Of the second 100, 28 died, and 72 recovered. But of this third series of 100 cases, only 23 died, and 77 recovered. The author has endeavoured to ascertain what influence tapping ovarian cysts may have upon the mortality of subsequent ovariotomy, and he has arranged in a table all his cases where tapping had never been done, and those in which it had been done from once to sixteen times. The general mortality of the 300 cases was 28.33 per cent. Nearly one-half of the patients, or 135, had never been tapped. In them the mortality was 27.40 per cent.—not one per cent. less than the average mortality. Rather more than one-fourth of the patients, or 78, had been tapped once. In them the mortality was 25.64 per cent. There were 19 who had been tapped three times, and the mortality was 26.32 per cent. Of the 36 who were tapped twice the mortality was exactly the same as that of the group of cases tapped from four to sixteen times—namely, 33.33 per cent. The author is led by these facts, and by other considerations discussed in the paper, to the following conclusions: 1. That one or many tappings do not considerably increase the mortality of ovariotomy. 2. That tapping may often be a useful prelude to ovariotomy, either by giving time for the general health to improve, or by lessening shock when the fluid is removed a few days or hours before removing the more solid part of an ovarian tumour; and 3. That when the siphon-trocar is used in such a manner as to prevent escape of ovarian fluid into the peritoneal cavity, and of entrance of air into the cyst, the danger of tapping is very small.

Dr. WEST agreed with Mr. Wells as to tapping being of service, especially as a preliminary operation which might satisfy the surgeon, the patient, and her friends. In most cases the patient cannot be said to die of the tapping. We were apt to be dazzled by the success of ovariotomy. He would not speak so, were it not necessary for him to, as it were, recant his former opinions. He could, therefore, with greater grace advocate the use of the minor operation. He would ask if any one now used iodine after tapping

Mr. SPENCER WELLS, in reply to Dr. West, said that he had lately conversed with M. Nélaton and M. Boinet, who had both large experience in the treatment of ovarian cysts by iodine injections, and he found that they had both arrived at the same conclusion as his own experience of seven cases would lead to. Of his own seven cases, only one patient was alive who had not since undergone ovariotomy. This one was still in tolerable comfort nearly ten years after the injection; but rather a large cyst could still be felt. If a cyst was unilocular, with thin walls and limpid contents, then, after tapping and injecting iodine, a radical cure occasionally followed. But it was very doubtful whether iodine had much or anything to do with the cure, because tapping alone, without the use of iodine, in this form of cyst was also occasionally completely successful. No more fluid was secreted, the cyst collapsed, its walls probably coalesced, and after a time no trace of it could be detected by the most careful examination. When the contents of a cyst are viscid, iodine is quite useless. In such cysts, and in multilocular cysts generally, injections of iodine should be restricted to cases where for some reason ovariotomy cannot be performed, but where a cure may be hoped for after suppuration and drainage. Here washing out the cavity, once or twice a day, or oftener, with plenty of iodine in solution, becomes very useful, by deodorizing the offensive secretions, and probably by preventing absorption of putrid fluid and blood-poisoning.—*Med. Times and Gaz.*, May 29, 1869.

42. *Curative Tapping in Ovarian Dropsy.*—Dr. ALEX. R. SIMPSON remarks (*Glasgow Med. Journ.*, May, 1869) that it is well to remember that ovarian dropsy, for which ovariotomy bids fair to become the almost exclusive remedy, is sometimes amenable to successful treatment under milder measures. For, whilst tapping of an ovarian dropsy in the vast majority of cases affords only temporary palliation of the distress, in certain circumstances it is followed by permanent contraction of the cyst, and perfect cure of the disease.

1. Where there is a slight degree of inflammatory action in the interior of the sac, if the contents be thoroughly drained away, and the inner surfaces of the collapsed walls kept in close apposition by means of pressure exerted from without, these surfaces may cohere; and reaccumulation of fluid in the cavity being rendered impossible, the flaccid cyst will shrivel up and disappear.

2. Where the fluid in an ovarian sac is clearly unirritating in character, if its walls be perforated so as to establish a free communication between its interior and the general cavity of the abdomen, the fluid secreted by the lining membrane of the sac will be absorbed by the serous surface of the peritoneum; and the reaccumulation of fluid in the cavity being in this instance hindered by the permanent patency of the aperture, the walls of the collapsed cyst, having no further office to fulfil in the way of holding in the dropsical fluid, meet the fate of other organs whose function is in abeyance, and become completely atrophied.

43. *Nephrotomy as a Means of Treating Renal Calculus.*—Mr. THOMAS SMITH read a paper on this subject before the Royal Med. and Chirug. Society, the object of which was to introduce to the notice of the Society, for discussion and consideration, a method of treating stones in the kidney and ureter which the author deems worthy of more thoughtful deliberation than it has hitherto received. The operation of nephrotomy, though mentioned and recommended, with certain reservations, by Hippocrates, was by him and his followers restricted to cases in which there was an external swelling, cases, in which, as they expressed it, "Nature showed the way." Even in this limited application, it is doubtful if the operation has ever been performed, except for the relief of renal abscess. So far as the author can ascertain, nephrotomy has been but once employed for the extraction of calculi from the kidney or ureter. This case, which occurred in the seventeenth century, is detailed in this paper. The operation was performed on the person of Mr. Hobson, the British Consul at Venice, from whose kidney an Italian surgeon successfully removed two or three small stones, by an operation performed in the lumbar region. Mr. Hobson subsequently visited England, and was seen and examined in London

by competent medical men, who have given an account of the case in the *Philosophical Transactions*. In discussing the subject of the paper, the author lays down as most desirable—1st, that we should be able clearly to recognize the existence of stone in the kidney; and, 2dly, that an operation should be devised for the removal of the stone which should not put the patient's life in danger disproportionate to the gravity of his disease and his desire for relief. A method of examining the kidney by palpation is described, by which the author has been able in one case to recognize the existence of tubercular deposits in the infundibulum of the ureter. Should it be impossible from any circumstance to employ this method of examination, so as to recognize a renal calculus, the author is of opinion that in some cases the subjective symptoms alone are so pathognomonic that the diagnosis might be considered sufficiently clear to proceed to operation; since by the plan of operation recommended in the paper, the kidney could be made the subject of tactile examination without serious danger to life. A plan of operation is detailed by which the pelvis of the kidney can be reached so as to examine it with the forefinger without injury to any important structures. Whether the performance of this operation would enable a stone to be removed without fatal damage to the renal tissue would (in the author's opinion) depend largely upon the shape, size, connections of the stone or stones, and the physical conformation of the patient; and while he confesses that there are cases of long-standing branched calculi that could not be removed without inflicting unjustifiable injury to the kidney or the surroundings, yet he believes that he has met with renal calculi that could have been removed without any such violence. If the conditions affecting the removal of the calculus were unfavourable, he believes that the operation would reveal these conditions without injury to the renal tissue, and could then be abandoned without having placed the patient's life in serious danger. The author thinks that the possibility of removing a stone from the kidney by nephrotomy should first be decided by operation on the dead body of one who has died with a stone in the kidney. He hopes that this experience may shortly be forthcoming, either by others performing the operation themselves on patients who may have died with the disease, or by the kindness of some surgeon giving the author an opportunity of performing the operation under similar circumstances; and this is one of the chief reasons why the author has made this communication to the Society.

Mr. CURLING thought the paper, although unsupported by cases, a most valuable one, considering the nature of the disease. Two points were to be considered, the practicability of diagnosis and of extraction. In children he thought the disease rare, but it was not so in the adult, and in the latter the difficulty of diagnosis was greatest. Still the subjective signs were pretty certain. Then, supposing the existence of a stone demonstrated, could it be removed? In the cutting part there was no very great difficulty or danger. In colotomy he had often had his finger on the kidney, and had found no difficulty in reaching its pelvis. Were the stone in the pelvis, there would be no great difficulty in removing it. But in the museum at the College of Surgeons there were plenty of specimens to stagger the surgeon. The symptoms might depend on calculi in the calyces, and there would be great difficulty in removing these. In itself the operation would be neither difficult nor dangerous, but its results were more doubtful.—*Med. Times and Gaz.*, May 29, 1869.

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44. *Indirect Osteoplasty.*—Prof. BILLROTH, in a contribution on the results of operative proceedings for favouring the regeneration of bone from periosteum, states that, in diseased conditions of the full-grown hollow bones of adult subjects, the periosteum resembles that found in early life, in being lined by a layer of cells, which may be converted into irregular and luxuriant masses of osseous tissue. This process is observed in cases of ostitis and acute periostitis, particularly in syphilitic subjects, in whom there is a great tendency to the formation of osteophytic growths. The sanguine expectations with which periosteal osteoplastic operations were undertaken have not, however, been fulfilled. In the first place, the surgeon has no power to limit or control the abundant formation of bone-cells from diseased periosteum; and, again, the

newly-formed bone after a time contracts like all other regenerated connective tissue, and finally wholly disappears. Artificial osteogenesis may be produced in children, after resection, when the wound heals by primary intention; but it fails in adults, and when the wound remains open for some time, with profuse suppuration. Rhinoplastic operations, in which flaps of periosteum had been detached from the frontal bone, though followed by formation of osseous tissue in the new nose, were ultimately unsatisfactory in their results, in consequence of the absorption of this tissue, and of the formation of an immovable and tense cicatrix on the forehead. The transplanting of periosteal flaps in operation for cleft palate is not approved of by Bilroth, in consequence of the great difficulty of the proceeding, and of its slight utility. In cases of necrosis of the gums from phosphorus-poisoning success has frequently attended periosteal resection when the formation of new bone was not prevented through profuse suppuration. The formation of a perfect maxillary bone must not be expected: in regeneration of the upper jaw, the antrum is lost, the bone itself is flattened, and the cheek sunken. In resection of joints, periosteal operations in consequence of the softened and relaxed condition of the membrane, have not resulted in marked success, except in a few cases, in which they were practised on young subjects, and where healing was perfected without severe symptoms. —*Brit. Med. Journ.*, March 27, 1869, from *Allgemeine Wiener Medizin. Zeit.*, No. 49, 1868.

45. *Treatment of Joint-affections by Continued Extension.*—Prof. Volkmann reports favourably of the method of continued extension in the treatment of diseases of certain joints. He has applied it with great success for hip-joint disease and affections of the vertebral column. In disease of the knee-joint, the results of this proceeding have not been found equally satisfactory. The cases in which continued extension was practised by Volkmann were generally those of acute, painful, and rapidly progressive coxalgia, and Pott's disease of the spine without much deformity. Anchylosis, extensive infiltration of the soft parts, periarticular suppuration, and chronic disease accompanied by formation of granulations between the bones, are all contraindications of this plan. The application of a weight, generally a sand-bag, to the extremity of the affected limb, in disease of the hip, removes pain and the tendency to muscular contraction, and also, by bringing the femur parallel to the axis of the body, serves to prevent great deformity and a faulty position of the thigh with regard to the pelvis. Professor Volkmann bases his practice upon the view that ulceration in joint-disease is produced by the close contact and pressure of inflamed synovial and cartilaginous surfaces. This, he thinks, is proved by the facts that the caries is most intense at the hard parts placed in contact, and that a cure is generally brought about after luxation of the limb, after resection, and even after removal of only one of the diseased articular surfaces.—*Brit. Med. Journ.*, March 27, 1869.

46. *Contraction of Knee Joint; Gangrene of Leg; Amputation.*—Dr. Böhm, in the *Bericht. d. Krankenanstalt Rudolp-Stiftung.* 1867, relates the case of a man 23 years old, who had suffered for many years from necrosis of the tibia; in consequence of which there had ensued immobility of the knee-joint, fixing the leg at an angle of 120°, with the thigh. An attempt was made to straighten the limb by force. On the day subsequently indications of commencing gangrene were observed in the toes of the affected limb. By the eighth day gangrene had so far progressed, that amputation above the knee was decided upon, notwithstanding the extensive œdema that was present. The operation was successful. The diameter of the principal artery of the amputated limb was found to be so much reduced that a thin knobbed probe could with difficulty be inserted in it.—*Centrblt. f. d. Medicinish. Wissenschaften.* Jan. 1869. D. F. C.

47. *Deformity from Burn; Successful Plastic Operation.*—In the same periodical Dr. Böhm relates the case of a journeyman smith who had accidentally incurred a severe burn of his right arm and side. After the lapse of one year from the complete cicatrization of the burned surface, the cicatrix occupied two-thirds

of the external surface of the arm, the region over the pectoralis muscle, and extended over a portion of the axilla. The forearm stood, immovable, at a right angle with the arm; the latter could be separated from the thorax only so far as to form an angle of 40°, while the hand could be separated from the body only about 4 inches. Dr. B., in the course of fifteen months, performed on the patient three separate operations, partly after the plan of Dieffenbach and partly by transplanting a sound portion of integument. At the same time properly regulated exercise of the affected part was instituted. The result was, that finally the patient so far recovered the use of his arm as to enable him to return to his occupation.—*Ibid.* D. F. C.

48. *Resection of the Ribs.* By M. DEMARQUAY.—We have room only for a brief abstract of a learned and exhaustive paper on this subject. He treats it under various heads.

I. *History.*—Recommended by Celsus, Galen, and Soranus, of Ephesus, this operation does not seem to have been much performed from their day down to the 16th century, when it was revived by Cercocus, who was regarded as its inventor. In the 17th century it is recommended by Aimar of Grenoble, and Severinus of Naples. In the 18th century it is recommended by many surgeons; among others, by Petit, Duvernay, and the elder Moreau. In the beginning of the present century, Pelletan, Boyer, Roux, and Percy all advise that the operation should be performed in suitable cases; and since that time a few cases have been put on record.

II. *Indications and counter-indications.*

1. *In the case where a foreign body has stuck in a rib.*—Molle records a case of this nature, in which he removed a portion of the fifth rib by the trepan, to get away a portion of a knife which had stuck in it, and could not be seized by forceps. The case was successful.

2. *In cases of fracture of the ribs.*—It may be right to remove the fractured portion which is driven in upon the lung; and also it would be probably justifiable, in a case of false joint, to cut down on it, and cut off the ends, saving the periosteum.

3. *In cases of caries and necrosis.*—Special operations should not be attempted in such cases until every means, both local and general, have been used to obtain healing-up of the fistulous openings, and improvement of the general health. But if the case is the result of external violence, then the conditions are altered, and the surgeon may find it necessary to interfere; as in a case where, eleven months after a stab with a stiletto, Cittadina had to remove a large portion of a necrosed first rib.

4. *In cases of cancer or tumour of the ribs,* for the purpose of removing the whole root and origin of the tumour.—Dr. Jacques, of Braine-le-Comte, removed a tumour as large as a fist from the tenth and eleventh ribs, with the portion of ribs from which it grew; and notwithstanding the pleura was opened, the patient recovered.

Richerand removed a cancerous tumour over the heart, and three inches of the sixth and seventh ribs, with the pleura, after which the beating of the heart could be seen.

III. *Position and extent of resection observed.*—All the ribs have been excised—most frequently only one, sometimes two, and in two cases three—in one operation. Generally the resection is only partial, and involves the middle or anterior part of the rib. In one case, by Professor Fiori, the bone (the eleventh) was completely disarticulated. Moreau, in one case, removed the anterior portion and the cartilages of both fourth and fifth ribs, and the corresponding portion of sternum.

IV. *Results of resection.*—If I were to judge from the cases collected, I would have to say the operation was not a dangerous one, as all the cases have recovered; but, as in many other similar delicate operations, surgeons have published only their successful cases. The two great dangers are: 1. Wound of the intercostal artery. 2. Wound of the pleura. It is necessary to distinguish between cases of real wound of the pleural cavity in which air is admitted and retraction of the lung takes place, and those more common cases in which the wound opens into a mere abscess or cavity of the thickened pleura, limited by old adhesions.

The operation is easy enough when the rib affected is superficial; more difficult when it is covered by muscles. The easiest method is to make an incision parallel to the rib intended to be removed; then make a perpendicular incision at each end of the first. Thus display the portion to be removed, separating from it both periosteum and pleura; then, with great care, a chain-saw may be passed behind it on a grooved director, by which the rib can be divided from within outwards, the pleura being protected by a spatula. Should, by any unfortunate chance, the pleural cavity be opened, it will be necessary in every possible way to endeavour to prevent the entrance of air. Should an empyema result, a free incision will be required to give exit to the pus.—*Ed. Med. Journ.*, April, 1869, from *Gazette Méd. de Paris*, Nos. 3 and 6, 1869.

49. *Catgut Ligature for Arteries.*—Prof. Lister extols the practical importance of catgut as a ligature for arteries. He states (*Lancet*, April 3, 1869) that by applying a ligature of animal tissue antiseptically upon an artery, whether tightly or gently, we virtually surround it with a ring of living tissue and strengthen the vessel where we obstruct it. This antiseptic animal ligature consists of catgut steeped in carbolic acid and oil. And with such a ligature Professor Lister says he should now "without hesitation undertake ligature of the innominate, believing it to be a very safe proceeding." He thus expresses himself as to the necessary qualities of the ligature: "The method which I have found to answer best is to keep the gut steeped in a solution of carbolic acid in five parts of olive oil, with a very small quantity of water diffused through it. A large proportion of the acid would impair the tenacity of the thread. If a mere oily solution is employed, the gut remains rigid, the oil not entering at all into its substance. But a very small quantity of water, such as the acid enables the oil to dissolve, renders the gut supple without making it materially weaker or thicker. And curiously enough, the presence of this small amount of water in the oily solution gradually brings about a change in the gut, indicated by a deep brown colour; after which it may be placed in a watery solution for a long time without swelling, as a portion prepared in a simple oily solution does. This is a great convenience; for an oily solution is unpleasant to work with during an operation, and exposure to the air soon renders gut suppled with water rigid from drying. But when it has been treated in the way above recommended, it may be transferred to a watery solution at the commencement of an operation, and so kept supple without having its strength or thickness altered. "For trying an arterial trunk in its continuity, catgut as thick when dry as ordinary purse-silk will be found best. But for ordinary wounds, where, if one ligature happens to break, another can be easily applied, much finer kinds may be employed, and are convenient from their smaller bulk."—*Practitioner*, May, 1869.

50. *Instrument of Dr. Amussat, Jr., for Washing out the Urinary Bladder.*—After the perineal operation of lithotomy, fragments of the calculus often remain in the bladder under the following circumstances:—

1st. When owing to the size of the calculus being too great to extract it by the perineal incision, the surgeon is obliged to break it.

2d. When the calculus is so friable that it becomes crushed by the forceps in the attempt to extract it.

3d. When, after lithotripsy, owing to some circumstances, the surgeon is obliged to abandon that operation and resort to perineal lithotomy in order to remove the fragments produced by the lithotrite.

Finally, sometimes we find in the bladder a large calculus with small ones. It is important, after the perineal operation, to carefully remove all the fragments of calculus and the gravel, lest they should subsequently become the nuclei for new calculi. To accomplish this is often difficult when the bladder is collapsed and may require the surgeon to resort to painful and protracted explorations.

When no more fragments can be detected with the forceps or scoop, it is the usual practice to introduce into the bladder through the perineal incision a straight canula and to repeatedly inject through it water in order to completely wash out the bladder. This plan is not always entirely effectual, and in order

Fig. 1.

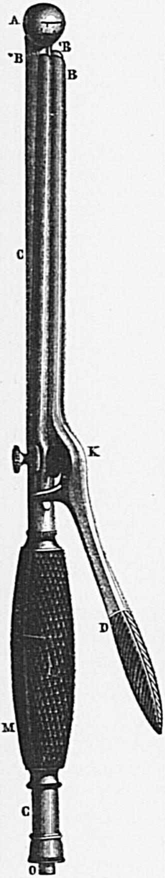


Fig. 2.

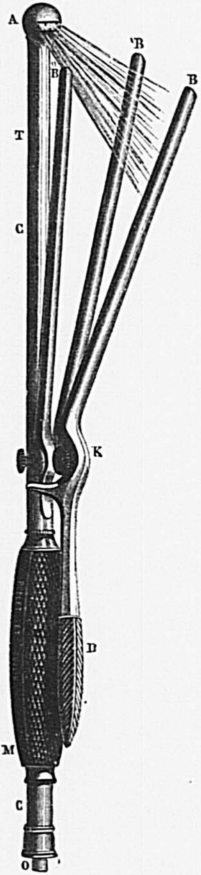
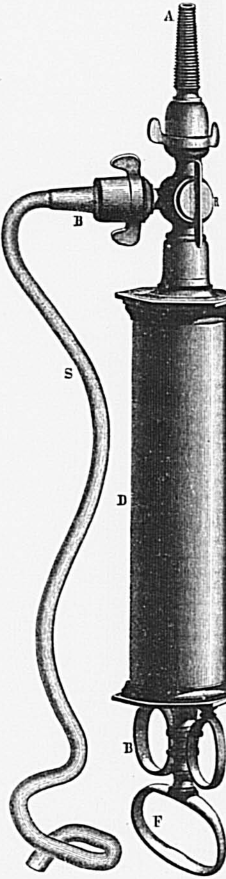


Fig. 3.



more completely to accomplish the object Dr. Amussat, Jr., has had constructed an instrument such as is represented (one half the natural size) in the accompanying Figures, 1, 2, and 3, and which he exhibited to the Surgical Society of Paris, August 5th, 1868.

This instrument, the mechanism of which is the same as that of the double lithotome of Dupuytren, consists of a silver tube, *T*, terminated by a bulb of the same metal *A*, having two oblique slits, as represented in Figs. 1 and 2 for the passage of the fluid. This silver tube is held in the groove of a steel rod, terminated by a handle *M*. Three steel blades *B, B,' B,"* designed to expand the bladder, are articulated at *K*, so that they may be separated from the tube by pressure on the lever *D*, or to be again applied by removing the pressure.

The extremity *O* of the silver tube fits into the pipe *A* (Fig. 3) of an ordinary syringe with a double acting cock so that a fluid can be drawn into the syringe through a caoutchouc tube *S*, and when it is filled, by turning the cock one-fourth round, the fluid may be forcibly injected into the bladder through the slits in the ball of the silver canula. When the instrument is introduced into the bladder the steel blades are closed on the silver canula as represented in Fig. 1. To wash out the bladder the blades are to be expanded as shown in Fig. 2 by pressing upon the lever *D*, and the piston forcibly pushed up so that the fluid projected against the parietes of the bladder, may wash out the fragments of calculi. A gum elastic ring applied near the joint *K*, serves to maintain the blades *B, B,' B,"* close to the silver tube.

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51. *Fibroid Outgrowth from the Fundus Uteri.*—Mr. T. Spencer Wells exhibited to the Obstetrical Society of London (April 7) a fibroid outgrowth from the fundus uteri. The specimen, which weighed 34 lbs. 10 oz., he had removed a few hours before the meeting from a single woman 36 years old. Eleven years before, half her lower jaw had been removed with a fibrous tumour by Mr. Pemberton, of Birmingham. An abdominal tumour was discovered five years ago; it enlarged gradually, and she was twice in the Birmingham hospital. During the last six months the tumour had increased rapidly, and she became very weak and lost flesh. On admission to the Samaritan Hospital, a very large tumour was discovered, which evidently contained no cyst large enough to warrant tapping, but which did not feel so hard as fibroid tumour of the uterus. No vascular murmur was audible in it, and it appeared to move quite independently of a uterus of normal size. When tumour was exposed Mr. Wells was surprised to find that it was not ovarian. It sprang from the posterior surface of the fundus uteri, by a short pedicle. This was secured temporarily by a clamp forceps (which was exhibited), and the tumour was cut away. Some bleeding spots where adhesions had been separated were secured by an acupressure needle, and the clamp was removed. Bleeding vessels were secured by harelip pins and twisted sutures, which also served to fix the bleeding surface to the abdominal wall by transfixion.

At the subsequent meeting of the Society Mr. Wells exhibited the uterus and ovaries of this patient. It was seen that the tumour had been an outgrowth from the posterior surface of the fundus, the rest of the organ being healthy, with the exception of another very small outgrowth. The patient died on the third day after operation, not from any bleeding, peritonitis, or other direct consequence of the operation, but from fibrinous deposit in the right side of the heart. Superfibrination of the blood had been feared from the first, on account of the rapid rise in the temperature of the body from 98.4° to 101° within twelve hours, and then rapidly upwards to 105.8°. This was accompanied by hurried breathing and feeble rapid pulse, with scanty secretion of urine, charged with urates and pigment. The first sound of the heart became feeble more than twenty-four hours before death, and was inaudible for fully twelve hours. In all operations where peritonitis might be expected, Mr. Wells said he considered its direct effects far less serious than its tendency to cause excess of fibrin in the blood and separation of the fibrin in the heart.

In reply to a question from the President, Mr. Wells said there appeared to be certain seasons in which this condition of the blood was epidemic, and at these seasons croup, diphtheria, and other conditions characterized by fibrinous exudations, were also prevalent. Dr. Richardson was constructing a table which would probably be of great value to surgeons, showing by meteorological observations certain relations of temperature, barometric pressure, dryness of the air, amount of ozone, etc., when fibrinous deposits might or might not be feared.

Dr. ROUTH said that in the *éclat* of operation it was perhaps not sufficiently considered that this tendency to fibrinous deposits was perhaps remediable. It was not because it was epidemic that we should remain satisfied, and let our patients die. Diphtheria was such a disease, and yet physicians tried to cure it, and often did. Rheumatism also was a disease in which there was a tendency to fibrinous deposits, but it too was curable. Why not try the same means with this affection at its onset? Dr. Richardson had stated to him that rheumatic fever was amenable to ammonia, and the alkaline treatment for that disease was common. In peritonitis accompanied with flocculent deposits, the fluid was often acid, showing that the blood was less alkaline than normal, and pointing to the use of alkalies, which might also be found useful in ante-mortem clots.—*Med. Times and Gaz.*, May 15 and 29, 1869.

52. *Cystitis in the Female.*—M. DEMARQUAY observes that this is a common affection, although it is generally but little studied. Those, however, who take the trouble to examine the urine of patients who apply to them on account of diseases of the uterus or its appendages will soon convince themselves of the fact. He is frequently consulted, both in private and hospital practice, by young women who suffer much in voiding the urine, and on examination he finds slight redness of the urethral mucous membrane, with or without tumefaction. Several of these patients had been submitted to various modes of treatment without effect, some even having been subjected to cauterization for the relief of pains supposed to be neuralgia. The pains occur under two circumstances—either when the urethra itself is inflamed, or when the urine is changed in its condition and contains pus. These last cases are due to a chronic cystitis, and the urine placed in champagne glasses deposits a certain amount of muco-pus.

The intimate relations connecting the uterus and bladder leads to the latter becoming influenced by the affections of the former. In acute diseases of the uterus, every one is aware of the more or less considerable disturbance in the emission of urine which takes place; but in chronic affections of the uterus the condition of the bladder has not excited sufficient attention. M. Demarquay has met with several cases of chronic metritis complicated with chronic cystitis, which have been completely misunderstood, which the more easily happens as the patients themselves rarely draw attention to the fact of the pain in passing urine, and the frequency with which it has to be voided. Usually the cystitis yields to the treatment adopted for the metritis when this proves successful; but still, in some cases, women in whom the uterine affections seem perfectly cured still continue to complain of suffering. The exploration of the uterus does not explain this, but on exploring the bladder and examining the condition of the uterus the cause of the suffering is explained. In fact, under some circumstances, most difficult to determine, a cystitis which originally arose from the proximity of the diseased uterus persists with obstinacy long after the latter has been effectually cured. This coincidence of acute or chronic cystitis with acute or chronic disease of the uterus has been noticed by various surgeons, but M. Demarquay does not believe that its frequency is sufficiently acknowledged.—*Brit. and For. Med.-Chir. Review*, April, 1869, from *Union Médicale*, October 3, 1868.

OPHTHALMOLOGY.

53. *Colour Blindness resulting from Neuritis.*—Colour blindness as a pathological condition is sufficiently rare to make every case of the kind worthy of being recorded. Dr. J. J. CHISHOLM, formerly of Charleston, S. C., now of